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THE PLANT DISEASE REPORTER

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Division of Mycology and Disease Survey

BUREAU OF PLANT INDUSTRY

UNITED STATES DEPARTMENT OF AGRICULTURE

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The Plant Disease Reporter is issued as a service to plant pathologists throughout the United States. It contains reports, summaries, observations, and comments submitted voluntarily by qualified observers. These reports often are in the form of suggestions, queries, and opinions, frequently purely tentative, offered for consideration or discussion rather than as matters of established fact. In accepting and publishing this material the Division of Mycology and Disease Survey serves merely as an informational clearing house. It does not assume responsibility for the subject matter.

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DIVISION OF MYCOLOGY AND DISEASE SURVEY

Volume XXV Number 12

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IN THIS ISSUE

Check list revision, by Freeman Weiss, page 322.

James S. Wiant and C. O. Bratley report diseases of fruits and vegetables observed on the New York market during the last quarter of 1940, page 332.

C. S. Holton reports, page 335, that flag smut occurred in Washington again this year, in the area where it was found in 1940.

Sclerotium rolfsii is the cause of a blight of black walnut seedlings in a Texas Forest Service Nursery, according to Walter N. Ezekiel and Chris Nelson, Jr., page 336.

In brief notes, page 337, W. D. Valleau and E. M. Johnson report a possible virus disease of black locust in Kentucky; E. M. Hildebrand comments on some hosts of the crown gall organism; C. S. Holton reports on wheat bunt in Oregon and Washington; and H. B. Humphrey transmits E. S. McFadden's report of stripe rust on wheat in Texas.

E. M. Hildebrand, page 338, invites all those interested to participate in a second X-disease clinic, to be held July 22 at Lockport, New York.

LEDUM--Continued

Synchytrium vaccinii Thomas, red leaf gall. Me.

LEIOPHYLLUM (ERICACEAE)

LEIOPHYLLUM BUXIFOLIUM (Berg.) Ell., BOX SANDMYRTLE. Small evergreen shrub of Growth Regions 28, 29, 30 (and related spp. in 27); sometimes cult. for ornament.

Exobasidium vaccinii (Fckl.) Wor., leaf gall. N. J., N. C.

LEUCAENA (LEGUMINOSAE)

LEUCAENA spp., especially L. GLAUCA (L.) Benth, LEADTREE. A small tree of tropical America and Pacific Is., cult. for ornament and locally naturalized in Fla.; also L. GREGGII Wats. and L. PULVERULENTA (Schlecht.) Benth., occurring in SW Texas.

Botryosphaeria ribis chromogena Shear et al., on branches. T. H.
Exosporium leucaenae Stevens & Dalby, leaf spot. P. R.
Physalospora obtusa (Schw.) Cke., on branches. T. H.
Ravenelia leucaenae Long, rust (II,III). Texas.

LEUCOTHOË (ERICACEAE)

LEUCOTHOË spp., especially L. AXILLARIS (Lam.) Don., L. CATESBIAE (Walt.) Gray, and L. RACEMOSA (L.) Gray. Evergreen or deciduous shrubs of Growth Regions 27, 28, 29, 30; frequently planted for ornament.

Asterina diplodioides Berk. & Curt., black leaf spot. Ala.
Cercospora kalmiae Ell. & Ev., leaf spot. N. J.
Clithris andromedae (Schw.) Ell. & Ev., on dead branches. N. J., N. Y., Pa.
C. leucothoicola Tehon, Pa.
Cryptostictis sp., leaf spot and canker. N. J.
Exobasidium vaccinii (Fckl.) Wor., leaf gall. Mass., Miss., N. C.
E. leucothoës P. Henn. (?E. vaccinii)
Laestadia leucothoës (Cke.) Sacc., on leaves. Md., R. I., S. C., Va.
Lophodermium orbiculare Sacc., leaf spot. N. C., Tenn.
Mycosphaerella leucothoës Miles, on leaves. Miss.
Pestalotia leucothoës White, leaf spot. N. J.
Phyllosticta terminalis Ell. & Mart. (P. leucothoës Ell. & Mart.) leaf spot. N. Y. to Fla.
Ramularia andromedae Ell. & Mart., leaf spot. N. J.

LEUCOTHOË--Continued

Valsa delicatula Cke. & Ell., on stems. N. J.
Venturia cassandrae Pk., on leaves. N. Y., N. C.
V. pezizoidea Sacc. & Ell., N. J.

LIBOCEDRUS (Pinaceae: Cupressaceae)

LIBOCEDRUS DECURRENS Torr., INCENSE CEDAR. Evergreen tree of Growth Regions 1, 4, 5; also cult., Zone V.

Chloroscypha jacksonii Seaver, Calif.
Coryneum cardinale Wagener, branch canker. Calif.
Cryptoporus volvatus (Pk.) Shear, wood rot. Calif.
Fomes pini (Brot. ex Fr.) Karst., red ring rot. Oreg.
F. pinicola (Sw. ex Fr.) Cke., brown crumbly heart rot. Cosmopolitan.
Gymnosporangium libocedri (P. Henn.) Kern, needle rust, branch swellings, sometimes witches' brooms (III). Calif., Oreg. (O and I on various Malaceae).
Herpotrichia nigra Hartig, brown felt blight. Calif.
Lentinus lepideus Fr., brown cubical rot of logs and timber. Cosmopolitan.
Lenzites saepiaria Wulf ex Fr., slash rot. Cosmopolitan.
Lophodermium juniperinum (Fr.) De Not., needle cast (secondary). Calif., Oreg.
Phoradendron juniperinum var. libocedri Engelm. (P. libocedri Howell), mistletoe. Calif., Nev., Oreg.
Phytomonas tumefaciens (EFS. & Town.) Bergey, crown gall. Ariz. Calif.
Polyporus spp. including P. abietinus (Dicks ex Fr.) Cke., P. versicolor L. ex Fr., and P. volvatus Pk., wood rot. Cosmopolitan.
P. amarus Hedgc., pecky heart rot, pin rot. Calif., Oreg.
P. schweinitzii Fr., butt rot, root rot. Occasional.
Stereum hirsutum Willd. ex Fr., wood rot. Cosmopolitan.

LIGUSTRUM (OLEACEAE)

LIGUSTRUM spp. (evergreen), especially L. JAPONICUM Thunb., JAPANESE PRIVET and L. LUCIDUM Ait., GLOSSY PRIVET. Shrubs or small trees of E. Asia, cult. for ornament and street trees, Zone VII.

Cephaleuros virescens Kze., green scurf. Gulf States.
Cercospora adusta Heald & Wolf, leaf spot. Ala.
C. ligustri Roum., Ga., Miss., Texas.
Clitocybe tabescens (Scop. ex Fr.) Bres., root rot. Fla.

LIGUSTRUM--Continued

Glomerella cingulata (Ston.) Spauld. & Schrenk, canker, dieback. Occasional.
Heterodera marioni (Cornu) Goodey, root knot. Southern States.
Phomopsis sp., on branches. Tenn.
Phyllosticta sp., on leaves. Texas, Va.
Phymatotrichum omnivorum (Shear) Dug., root rot. Texas.
Phytomonas tumefaciens (EFS. & Town.) Bergey, crown gall. Occasional.
Chlorosis, --mineral deficiency. On calcareous soils, Gulf States.

LIGUSTRUM spp. (deciduous to half evergreen), including L. AMURENSE Carr., AMUR PRIVET, shrub or small tree of N. China, cult. Zone III; L. OVALIFOLIUM Hassk., CALIFORNIA PRIVET, native of Japan, cult. Zone V; and L. VULGARE L., COMMON PRIVET (including numerous hort. forms), native of Europe, cult. Zone IV and naturalized in Eastern States.

Aphelenchoides fragariae (Ritzema Bos) Steiner & Buhrer, leaf nematode.
Armillaria mellea Vahl ex Fr., root rot. Miss., Texas.
Botryosphaeria ribis Gross. & Dug., on branches. Ala.
Cercospora adusta Heald & Wolf, leaf spot. Del. to Ala. and Texas.
C. ligustri Roum., Gulf States.
Clitocybe monadelpha Morgan, root rot. Ark.
Corticium koleroga (Cke.) Höhn., thread blight. Fla.
Cuscuta sp., dodder. Texas.
Diaporthe eres Nit., on dead twigs. N. Y., Va.
(D. ligustrina Ell. & Ev.): ?D. eres
Excsporium concentricum Heald & Wolf, leaf spot. Texas
Fomes applanatus (Pers. ex Fr.) Gill., collar rot. N. Y.
Glomerella cingulata (Ston.) Spauld. & Schrenk, anthracnose, canker, dieback. General (especially on L. vulgare).
Heterodera marioni (Cornu) Goodey, root knot. Southern States.
Microsphaera alni DC. ex Wint., powdery mildew. Ind., N. J., Ohio.
Pezizella oenotherae (Cke. & Ell.) Sacc., on leaves & stems.
(Phoma ligustrina Sacc.): ?Diaporthe eres
Phyllosticta ovalifolii Brun., leaf spot. Md., Miss., Texas.
Phymatotrichum omnivorum (Shear) Dug., root rot. Ariz., Okla., Texas.
Physalospora obtusa (Schw.) Cke., on branches. Ala., Va.
Phytomonas tumefaciens (EFS. & Town.) Bergey, crown gall. Occasional.
Phytophthora sp., root rot. Calif.
Polyporus versicolor L. ex Fr., wound rot. Cosmopolitan
Ramularia sp., leaf blight. N. J.
Rosellinia necatrix (R. Hart.) Berl., root rot. Calif.
Stereum hirsutum Fr., wood rot. Cosmopolitan.
Variegation, --?virus. Variegated forms of privet are in cult.; graft-transmission has been shown in some.

LIPPIA (VERBENACEAE)

LIPPIA spp. Several native shrubs of S. W. U. S. to South America, as L. LIGUSTRINA Britt., WHITEBRUSH, sometimes planted for ornament; also S. American spp. as L. CANESCENS H. B. K. grown as a ground cover in the South, and L. CITRIODORA H. B. K., LEMON-VERBENA, cult. in herb gardens.

Cercospora lippiae Ell. & Ev., leaf spot. Texas.
Cylindrosporium lippiae Heald & Wolf, leaf spot. Texas.
Heterodera marioni (Cornu) Goodey, root knot.
Meliola lippiae Maubl., black mildew. Fla.
Phymatotrichum omnivorum (Shear) Dug., root rot. Texas.
Sclerotium rolfsii Sacc., Southern wilt, Calif.

LIPPIA LANCEOLATA (L.) Michx., FOG-FRUIT. Herbaceous; Eastern and Central States southward.

Cercospora lippiae Ell. & Ev., leaf spot. Widespread.
Sphaceloma lippiae Baines & Cumm., anthracnose. Ind.

LIQUIDAMBAR (HAMAMELIDACEAE)

LIQUIDAMBAR STYRACIFLUA L., SWEETGUM. Forest tree of Growth Regions 20, 22, 25, 27, 28, 29, 30; also planted for ornament. L. formosana Hance, and L. orientalis Mill., of Asiatic origin, are cult. in the South (Zone VI).

Anthostoma amygdalinum (Cke.) Sacc., on bark. Ala., S. C.
Botryosphaeria ribis (Tode ex Fr.) Gross. & Dug., also var. chromogena Shear et al., on branches, ?canker. Md. to Fla. and La.
Ceratostomella pluriannulata Hedgc., wood stain. Gulf States.
Cercospora liquidambaris Cke. & Ell., leaf spot. Md. to Fla. and Texas. (A nomen nudum but widely used.)
C. tuberculans Ell. & Ev., La., Miss., Mo.
Diplodia natalensis Evans, wood stain. Gulf States.
Daedalea confragosa Bolt. ex Fr., wood rot. Cosmopolitan.
Endothia gyrosa (Schw.) Fckl., on dead branches and exposed roots. Md. to Gulf States.
Endoconidiophora coerulescens Münch and E. moniliformis (Hedgc.) Davidson, wood stain. Gulf States.
Exosporium liquidambaris Tharp, leaf spot. Texas.
Fomes spp. (F. applanatus (Pers. ex Fr.) Gill., F. fraxineus (Bull. ex Fr.) Cke. and F. geotropus Cke., F. marmoratus (Berk. & Curt.) Cke.), wood rot of logs, timber and sometimes living trees.
Ganoderma curtisii (Berk.) Murr., and G. lucidum (Leyss. ex Fr.) Karst., wood rot (of fallen or sometimes standing trees). Southern States.

LIQUIDAMBAR--Continued

Gloeosporium ?nervisequum (Fckl.) Sacc., on leaves. Miss., Texas.
Graphium rigidum (Pers.) Sacc. and G. rubrum Rumbold, wood stain. Southern States.
*Heterodera marioni (Cornu) Goodey, root knot.
Hymenochaete agglutinans Ell., canker. Md.
Lasiosphaeria pezizula (Berk. & Curt.) Sacc., wood stain. Ill.
Lentinus lepideus Fr., wood rot of timber. Cosmopolitan.
Lenzites spp. (L. betulina L. ex Fr., L. saepiaria Wulf ex Fr., L. vialis Pk.), wood rot of logs and timber. Cosmopolitan.
Leptothyriella liquidambaris Tehon & Stout, red leaf spot. Ill., Md., N. C.
Myriangium duriaei Mont. & Berk., on scale insects infesting bark. Widespread.
*Nectria sp., canker. Ga.
Penicillium spp., green mold of timber. Cosmopolitan.
Phoradendron flavescens (Pursh) Nutt., mistletoe. Ohio to N. C. and Texas.
Phymatotrichum omnivorum (Shear) Dug., root rot. Texas.
Physalospora spp. (P. fusca N. E. Stevens, P. obtusa (Schw.) Cke., P. rhodina (Berk. & Curt.) Cke.), on branches. Southeastern States.
Phytomonas tumefaciens (EFS. & Town.) Bergey, crown gall. Md.
Pleurotus corticatus Fr., sapwood rot. La., Miss.
Polyporus spp. (P. cinnabarinus Jacq. ex Fr., P. dichrous Fr., P. fissilis Berk. & Curt., P. galactinus Berk., P. hirsutus Wulf. ex Fr. P. hydnoides Sw. ex Fr., P. ludovicianus (Pat.) Sacc. & Trott., P. pargamenus Fr., P. rhipidium Berk., P. sanguineus L. ex Fr., P. spraguei Berk. & Curt., P. subectypus (Murr.) Lloyd, P. supinus Sw. ex Fr., P. versicolor L. ex Fr., P. zonalis Berk.), wood rot chiefly of logs, sometimes standing trees.

P. adustus Willd. ex Fr. and P. gilvus (Schw.) Fr., white mottled heart rot. Widespread.
P. sector Ehr. ex Fr., butt and root rot. Fla., Miss.
Poria spp. (P. ambigua Bres., P. canescens Karst., P. earlei (Murr.) Sacc. & Trott.,
P. ferruginosa Schrad. ex Fr., P. flaccida Overh.,
P. langloisiana Murr., P. nigrescens Bres.,
P. versipora Pers. ex Romell), wood rot.
Schizophyllum commune Fr., sapwood rot. Cosmopolitan.
Sciridium liquidambaris Berk. & Curt., on branches, ?sapwood rot. S. C.
Septobasidium spp. (S. alni var. squamosum Couch, S. apiculatum Couch, S. burtii Lloyd, S. pseudopedicellatum Burt, S. sinuosum Couch, and others), on scale insects infesting bark. Southern States.
Septoria liquidambaris Cke. & Ell., leaf spot. Mass. to Fla. and Texas.

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*Hydnum ochraceum Pers. ex Fr. and H. pulcherrimum Berk. & Curt., wood rot, sometimes on living trees. Gulf States.
*Panus laevis Berk. & Curt., wound rot. Ark., La.

LIQUIDAMBAR--Continued

Sphaeropsis liquidambaris Dearn. & House (?Physalospora obtusa), on branches. N. Y.
Stereum spp. (S. fasciatum Schw., S. gausapatum Fr., and others), wood rot.
S. subpileatum Berk. & Curt., pocket rot of logs. Gulf States.
Torula ligniperda (Willk.) Sacc., red wood stain. Widespread.
Trametes rigida Berk. & Mont., pocket rot of timber. Southern States.
Valsa liquidambaris (Schw.) Cke., on branches, N. J., S. C.

LIRIODENDRON (MAGNOLIACEAE)

LIRIODENDRON TULIPIFERA L., TULIPTREE, YELLOWPOPLAR. Deciduous forest tree of Growth Regions 21, 22, 23, 24, 25, 26, 27, 28, 29; also cult. in several hort. forms. L. CHINENSE (Hemsl.) Sarg., of China, is sometimes cult. in the South.

Asteroma liriodendri Cke., on leaves. Md., S. C.
Botryosphaeria ribis (Tode ex Fr.) Gross. & Dug., also var. chromogena Shear et al., on branches. Fla., Ga., Pa.
Capnodium elongatum Berk. & Desm. sooty mold. Cosmopolitan.
Ceratostomella spp. (C. multiannulata Hedgc. & Davidson and C. pluriannulata Hedgc.), blue wood stain. Va. to Gulf States (See also Endoconidiophora.)
(Cercospora liriodendri Ell. & Harkn.): Mycosphaerella tulipiferae
Chlorosplenium aeruginosum (Oud.) DeNot. green wood stain. Cosmopolitan.
Collybia velutipes (Curt.) Fr., white spongy rot. W. Va.
Cylindrosporium cercosporicides Ell. & Ev., leaf spot. Md., W. Va.
C. scoparium Morgan, collar rot of seedlings. N. J.
Cytospora leucostoma Sacc. var. magnoliae D. Sacc., on branches. Md., Va.
Daedalea extensa Pk. and D. unicolor Bull. ex Fr., wood rot of logs or sometimes standing trees.
Daldinia verniciosa (Schw.) Ces. & DeNot., wood rot. Cosmopolitan.
Diaporthe eres Nit., on dead branches. Md.
Diplodia liriodendri Pk., on branches. N. Y., W. Va.
Dothiorella sp., canker. Pa.
D. minor Ell. & Ev., on branches. Md., W. Va.
Ectostroma liriodendri Kze. ex Fr. (also Xyloma and possibly Rhytisma liriodendri Wallr. in part), tar spot. Widespread. (Probably mostly insect injury with fungi, when present, secondary.)
Endoconidiophora coerulescens Münch, blue wood stain. Va. to Gulf States.
Erysiphe polygoni DC., powdery mildew. Widespread.

LIRIODENDRON--continued

Fomes applanatus (Pers. ex Fr.) Gill., white mottled heart rot. Occasional.
Gloeodes pomigena (Schw.) Colby, on branches. Ind., W. Va.
Gloeosporium liriodendri Ell. & Ev., leaf spot. Conn. to N. J. and Texas.
Graphium rubrum Rumbold, pink wood stain. Ohio to Miss. and S. C.
Lasiosphaeria pezizula (Berk. & Curt.) Sacc., wood stain. S. C.
Lenzites betulina L. ex Fr. and L. saepiaria Wulf. ex Fr., wood rot of logs and timber. Cosmopolitan.
Leptothyrium liriodendri Cke., on leaves. S. C., W. Va.
Mycosphaerella liriodendri (Cke.) Woronichin, leaf spot. Ga., Mich., N. Y. M. tulipiferae (Schw.) Higgins, leaf spot. Middle Atlantic and Gulf States.
Myxosporium spp. (M. coloratum (Pk.) Sacc., M. liriodendri Dearn. & House, M. longisporum Edg.), on twigs, ?canker. N. Y.
M. tulipiferae Died., on twigs. Iowa.
Nectria sp., canker. W. Va. to N. C. and Tenn.
Phoma tulipiferae Schw., on leaves. N. Y., Pa.
Phyllactinia corylea Pers. ex Karst., powdery mildew. N. Y. to Ala. and Mo.
Phyllosticta liriodendrica Sacc., leaf spot. Widespread. (Conidial stage of Mycosphaerella liriodendri.)
P. macrospora Ell. & Ev., on leaves. Pa., Va., W. Va.
Phymatotrichum omnivorum (Shear) Dug., root rot. Texas.
Physalospora obtusa (Schw.) Cke., on branches. Md. to Ga. and Tenn.
Pleurotus ostreatus Jacq. ex Fr., sapwood rot. Occasional.
Polyporus spp.(P. adustus Willd. ex Fr., P. caesius Schrad. ex Fr., P. cinnabarinus Jacq. ex Fr., P. dichrous Fr., P. graveolens (Schw.) Fr., P. hirsutus Wulf. ex Fr., P. lacteus Fr., P. pubescens Schum. ex Fr., P. pulchellus Schw., P. resinosus Schrad. ex Fr., P. sulphureus Bull. ex Fr., P. tulipiferus (Schw.) Overh., P. versicolor L. ex Fr., P. zonalis Berk.), wood rot of logs or sometimes standing trees.
Ramularia liriodendri Ell. & Ev., leaf spot. Ala., Del.
Phytisma liriodendri Wallr. (Xyloma), black leaf spot. Calif., Texas. (See also Ectostroma.)
Rhizoctonia solani Kühn, seedling blight. Ohio, Va.
Schizophyllum commune Fr., sapwood rot. Cosmopolitan.
Stereum spp.(S. gausapatum Fr., S. rameale Schw., S. umbrinum Berk. & Curt. and others), wood rot of logs and slash.
Torula ligniperda (Willk.) Sacc., pink wood stain. Widespread.

LITCHI (SAPINDACEAE)

LITCHI CHINENSIS (Nephelium litchi), LITCHI. Chinese tree grown for edible fruit in Hawaiian Is. and Southern Fla. and Calif.

Gloeosporium sp., leaf blight. Fla., T. H.

LITHOCARPUS (FAGACEAE)

LITHOCARPUS DENSIFLORA (Hook. & Arn.) Rehd., TANBARK OAK. Evergreen tree of Growth Regions 1 and 4.

Ceuthocarpum conflictum (Cke.) Sacc., on leaves. Calif. = Linospora conflicta (Cke.) Sacc.
Cronartium quercuum (Berk.) Miyabe, rust (II, III). Calif. (Perhaps a composite sp.; it includes, according to Arthur, C. cerebrum Hedgc. & Long, C. conigenum Hedgc. & Hunt, C. fusiforme Hedgc. & Hunt and C. strobilinum Hedgc. & Hahn, to all of which this host is susceptible as shown by artificial inoculations; O and I on Pinus spp.)
Pestalotia (Pestalozzia) castagnei Desm., leaf blight. Calif.
Poria spp. (P. ferrea Pers. ex Fr., P. versipora (Pers.) Romell, and P. viridans Berk. & Br.), wood rot of trunks and logs. Calif.
Stereum hirsutum Willd. ex Fr., wood rot. Calif.

LITSEA (LAURACEAE)

LITSEA GENICULATA (Walt.) Benth. & Hook., POND SPICE. Deciduous shrub of Growth Regions 25, 28, 29, 30; sometimes grown for ornament.

Cercospora olivacea (Berk. & Rav.) Ell., leaf spot. Ga.

LONCHOCARPUS (LEGUMINOSAE)

LONCHOCARPUS spp. Tropical trees or climbing shrubs, sometimes grown for ornament.

Atelocanda incrustans Arth. & Cumm. Canal Zone.
Meliola bicornis Wint. and M. lonchocarpicola F. L. Stevens, black mildew. Canal Zone, P. R.

LONICERA (CAPRIFOLIACEAE)

LONICERA spp., HONEYSUCKLE. Numerous spp. of shrubs and woody vines, including several native to various but mostly northerly parts of N. America, some of which are cult.; and also a large number of Asiatic spp. cult. for ornament and sometimes locally naturalized.

Cercospora antipus Ell. & Holw., leaf spot. Mich. to Mont. and Texas.
C. varia Pk., Texas.
Diaporthe eres Nit., on dead branches. Widespread.
Erysiphe polygoni DC., powdery mildew. Calif., Wyo.

LONICERA--Continued

(Gloeosporium lonicerae Harkn.): Marssonina lonicerae,
Glomerularia lonicerae (Pk.) Dearn. & House, leaf blight. Conn., Iowa, N. Y. Wis.
Guignardia lonicerae Dearn. & Barth., leaf spot. Calif.
Heterodera marioni (Cornu) Goodey, root knot. Only reported on L. nitida in U. S.
Kabatia lonicerae (Harkn.) Höhn., leaf spot. Calif. (Combination based on Marsonia (Gloeosporium) lonicerae Harkn. and said to include Leptothyrium periclymeni var. americanum Ell. & Ev. Possibly should be K. periclymeni (Desm.) Bubak.)
Lasiobotrys affinis Harkn., leaf spot. Pacific Northwest and Calif.
Leptothyrium periclymeni (Desm.) Sacc., leaf spot. Widespread. var. americanum Ell. & Ev., N. Y. and Wis. (See Kabatia lonicerae.)
Marssonina lonicerae (Harkn.) Magn. leaf spot. Calif. (See Kabatia.)
Microsphaera alni DC. ex Wint., powdery mildew. General. (var. lonicerae (DC.) Salmon is reported but not authenticated in U. S.)
Phoma mariae Clinton, twig blight. Conn., Mass., N. Y.
P. xylostei Cke. & Harkn., on branches. Calif.
(Phomopsis cryptica (Nit.) Höhn.): Diaporthe eres.
Phyllosticta vulgaris Desm. (P. lonicerae Westend.), on leaves.
Phymatotrichum omnivorum (Shear) Dug., root rot. Texas.
Physalospora obtusa (Schw.) Cke., on branches. Eastern and Southern States.
Phytomonas tumefaciens (EFS. & Town.) Bergey, crown gall. Widespread.
P. rhizogenes Riker et al., hairy root. Central States.
Puccinia festucae (DC.) Plowr., rust (I). Iowa. (II and III on Festuca but not collected in America.)
Rhabdospora decipiens (Berk. & Curt.) Sacc., on twigs. S. C.
R. lonicerae (Cke. & Ell.) Sacc., N. J.
Septoria sambucina Pk. (?S. xylostei Sacc. & Wint.) leaf spot. Wis., Mont.
Sphaeronema lonicerae Pk., on stems. N. Y.
(Sphaeropsis punctum Cke. & Ell.): Physalospora obtusa.
Thyronectria lonicerae Seeler, on twigs. Colo., N. Dak.

LONICERA JAPONICA Thunb., JAPANESE HONEYSUCKLE. Half evergreen vine of E. Asia, naturalized in Growth Regions 5, 20, 22, 25, 27, 28, 29, 30; several vars. in cult.

Corticium koleroga (Cke.) Höhn., thread blight. La.
Diplodia sp., on stems. Va.
Dothidea collecta (Schw.) Ell. & Ev. (= D. tetraspora Berk. & Br.), on stems. N. C., Va.
Phoma mariae Clinton, twig blight. Mass., N. Y.
Phytomonas tumefaciens (EFS. & Town.) Bergey, crown gall. Conn.
Solenia ochracea Hoffm. ex Fr., on stems. La.

(Division of Mycology and Disease Survey, Bureau of Plant Industry.)

DISEASES OF FRUITS AND VEGETABLES ON THE NEW YORK MARKET DURING THE MONTHS OF OCTOBER, NOVEMBER, AND DECEMBER, 1940.

James S. Wiant and C. O. Bratley

APPLES

During the first 2 weeks of December a number of carlots of apples from the Pacific Northwest and British Columbia arrived with the layer of fruit next to the floor racks frozen solidly.

ASPARAGUS

Two shipments of asparagus from Argentina, each consisting of over five hundred crates, arrived in very bad condition during December. In many crates of one shipment from 30 to 70 percent of the stalks were affected. In the other, losses from decay ranged from 2 to 50 percent in many crates. The decay was chiefly blue mold rot (Penicillium sp.) and bacterial soft rot (Erwinia carotovora) although fusarium rot (Fusarium sp.) and gray mold rot (Botrytis sp.) also were present.

AVOCADO

Several boat shipments of Cuban avocados received during the period were overripe and soft. Most lots contained small amounts of anthracnose (Colletotrichum gloeosporioides) and in 2 there were 5 and 10 percent respectively.

CUCUMBER

Many lots of cucumbers arriving from Puerto Rico throughout the month of December were affected with high percentages of decay--chiefly mycosphaerella black rot (Mycosphaerella citrullina). In some lots, cottony leak (Pythium aphanidermatum) was a factor of importance.

GRAPES

Juice grapes, chiefly of the variety Alicante, showed high percentages of spoilage during the fall months. Most of this was due to gray mold rot (Botrytis sp.) which affected over 25 percent of the berries in a number of cars examined.

Complaints were received from a number of receivers that juice grapes in the top layer lugs in many cars were arriving in a wet condition, thus predisposing the fruit to rapid decay after its removal from the cars. Careful examination of a number of loads revealed that the condition was important only in the 2 top layers of lugs near the bunkers in the cars. There was no indication that the wetness had been caused by decay, freezing, or sulfur dioxide injury as had been

suspected by the receivers. Apparently the constant jarring received during transit at this location just above the wheels had injured the berries enough to cause some juice to be exuded.

Sulfur dioxide injury was noted in a number of carlots of California Emperor grapes upon their arrival at New York. Two cases of the most severe injury ever noted here were in 2 cars of the Alicante variety from a single California shipper. Many of the berries scattered throughout the load were bleached to a dull red color, and even sound appearing berries had a disagreeable sulfurous flavor. Inquiries made at shipping point revealed that 15 pounds of sulfur had been burned in each car instead of 5 pounds customarily used by many shippers of juice grapes.

The method of treating grapes stored in California with small amounts of sulfur dioxide at intervals of 7 to 14 days has been used successfully for several years. Receivers who store grapes on the markets are becoming increasingly insistent that warehouse managers treat the grapes in the East. Although concentrations and methods used in California have been applied, some injury has resulted. Apparently the mechanical injuries received during transit and handling increase the susceptibility of the fruit to injury.

HONEY DEW MELON

An unusual type of market trouble was encountered in six cars of late-season Arizona Honey Dew melons that were observed during the last several days of October. In an apparent attempt to control mold, the shipper introduced sulfur dioxide gas into the car with results that were disastrous to the appearance of the melons. Upon arrival at New York City from one to four melons per flat showed shallow, sunken, bleached spots in the rind. These were of irregular shape and pattern, and were scattered over 25 to 65 percent of the surface. Although the flavor was not markedly impaired the appearance of the melons was such as to cause a serious reduction in sale price.

During the first week of October (as well as the last week or ten days of September) unusually heavy decay losses were found in carlots of Honey Dew melons from Colorado. Phytophthora rot (Phytophthora capsici) was chiefly responsible although cladosporium rot and decays caused by species of Fusarium were of importance. Anthracnose (Colletotrichum lagenarium) lesions were found affecting a few melons in an occasional car.

PEAS

Pod blemishes caused by the feeding of the thrips insect (Thrips tabaci), and scab (Cladosporium pisicola) were important defects noted in occasional cars of California peas.

PERSIMMON

Approximately 8 percent (range of 3 to 12 percent) of the fruits in a carlot of California persimmons arriving in mid-December were found affected with gray mold rot (Botrytis sp.).

PLUMS

Several lots of California plums were shipped out of New York during September to ports along the east coast of South America. On arrival there the plums were reported to be dry and discolored inside. Several packages of the President variety were returned to New York where they were found to be affected with what appeared to be a breakdown due to long storage. Externally they were slightly dull. The flesh in some was brown and watersoaked, in others dry and stringy, and in still others it was moist and mealy. The flavor was flat and resembled that of slight fermentation. It is not surprising that spoilage occurred in the shipments for the fruit had been off the trees for at least 10 days before it reached New York and the trip to Brazil required an additional 17 days.

POMEGRANATE

Two carlots of California pomegranates arriving respectively near the middle and near the end of December were seriously affected with gray mold rot (Botrytis sp.). Inoculation appeared to have taken place through the open calyx with the decay progressing from that end of the fruit. The normal red pigment was bleached out in the affected rind which had become light brown. The internal rind tissues were likewise brown, slightly softer and more moist than those of healthy rind. There was little softening or other evidence of decay in the arils of the fruit.

A thinly-scattered light growth of gray mold was present in the calyx cavity and over the affected areas of the rind.

From 5 to 50 (averaging 20) percent of the fruit were so affected in one car and from 3 to 20 (averaging 10) percent in the other carlot.

TANGERINES

Heavy shipments of tangerines for the Christmas holiday trade arrived mostly in good condition. Several lots noted contained from 2 to 12 percent decay, mostly blue mold rot (Penicillium digitatum).

TOMATO

Rots caused by species of Cladosporium, Alternaria, and Macrosporium (including the important Pleospora lycopersici) were again the chief cause of wastage in California tomatoes. Late blight (Phytophthora infestans) occurred in small amount in many cars throughout much of the season. It was not, however, responsible for any appreciable loss within a given carlot except in occasional instances.

In marked contrast with the experience of recent years, virus mottling and irregular ripening were not of major importance. Likewise of somewhat less importance than in previous years (on California tomatoes) were the various types of skin checks and blemishes that previously have seriously blemished the fruits.

VEGETABLES

During the latter part of November a 4000-crate shipment of Texas vegetables was carried by unrefrigerated boat from Brownsville to New York. Despite forced draft ventilation the temperature of the shipment on arrival varied between 60° and 70°F., though outside air temperature was 40°F. Bacterial soft rot (Erwinia carotovora) and rhizopus rot (Rhizopus sp.) affected from 10 to 75 percent of the fruit in most crates of PEPPERS. Calyces of all the EGGPLANTS were darkened and moldy, and about 15 percent of the fruit was affected with rhizopus rot. SUMMER SQUASH contained about 10 percent decay, mostly rhizopus rot.

(Division of Fruit and Vegetable Crops and Diseases.)

FLAG SMUT OF WHEAT IN WASHINGTON

C. S. Holton

I have just returned from a trip to Goldendale, Klickitat County, Washington, where flag smut (Urocystis tritici) was found last year (P. D. R. 24: 382. Oct. 15, 1940). Doctor Salmon and Mr. Suneson, and Dr. S. P. Swenson of the Agronomy Department here, were with me on a survey of the county.

On this survey we examined 58 fields of wheat in the vicinity of Goldendale, Washington, and found flag smut in 21 of them. The varieties represented in these fields were Hymar, Rex, Hybrid 128, Turkey, and Golden. The degree of infection ranged from a trace to 3 percent and was limited to the first 3 varieties named. Only 3 fields of Turkey and one of Golden were examined and none of these had flag smut.

The distribution of the fields with flag smut was rather concentrated. Only 2 fields out of 35 examined west and south of Goldendale had flag smut while 19 out of 21 fields examined east of Goldendale had smut. On the main road east for 16 miles to Rock Creek every field along the highway had smut except the one field of Golden. This includes the ranch where the smut was found last year. Again this farm had smut in both Hymar and Rex. On one farm where Hybrid 128 has been grown for ten years or more, there was 2 to 3 percent flag smut, and the farmer said he had never seen it before. On another farm where Hybrid 128 has been grown for at least 10 years, less than 1 percent smut was found . . .

and this farmer also had never seen it before. Whether they never had it before or simply missed seeing it is difficult to determine.

(Division of Cereal Crops and Diseases. June 18.)

SCLEROTIAL SEEDLING BLIGHT OF BLACK WALNUT

Walter N. Ezekiel and Chris Nelson, Jr.

On May 22, 1941, a number of seedlings of black walnut (Juglans nigra) were found dying in the nursery bed at the Indian Mound State Forest Nursery, operated by the Texas Forest Service near Alto, Texas. Abundant fungus strands were found growing on the soil and on the seedlings around the root collar. Specimens placed in a moist chamber in the laboratory developed within a few days white mycelium with clamp connections and the small white spheric sclerotia typical of Sclerotium rolfsii Sacc.

The walnuts had been taken out of stratification pits and sown in nursery rows 2 feet apart during the first week of April. Germination was about 50 percent complete by May 10; the seedlings were about 3 weeks old and about 6 inches tall when the disease was first observed.

By June 6, most of the diseased seedlings were browned and dead. A hundred or so isolated plants, scattered throughout the long bed, had been killed. Not more than 2 or 3 diseased plants could be found at any one location; usually only a single plant, representing apparently an initial infection, had been attacked. A number of the plants were removed at various locations in the nursery bed. Every diseased plant showed S. rolfsii strands and typical small spheric sclerotia, over the crown, and often also over the large nuts still attached to the plants and located 1-3 cm. or so deep in the soil. The fungus was apparently spreading from some of the plants, in centrifugal white fans just below the surface soil crust, usually less than 1 cm. deep. Sclerotia were often evident in these fans. Some of the plants were taken into the laboratory, and in moist chamber developed additional white growth with spherical, yellowish-white to light buff to dull brown-colored sclerotia, measuring 0.8 - 1.1 mm. in diameter.

The constant association of S. rolfsii with the diseased plants, and the type of injury closely resembling that caused by this fungus on other plants, suggests that the seedling blight observed can be considered due to this fungus. S. rolfsii does not appear to have been reported previously on Juglans. The present onset of the disease was undoubtedly favored both by the artificial irrigation in the nursery and the unusually rainy season. S. rolfsii has long been known as widely prevalent in this general area on tomatoes and other host plants. Just how serious an enemy it will prove to the walnut seedlings will depend on the extent of spread from the initial centers of infection such as

those now noted. Soil fungicide drenches are to be tried to prevent further spread, and results of such treatments may be reported later.

(Texas Agricultural Experiment Station; Texas Forest Service.)

BRIEF NOTES ON PLANT DISEASES

A POSSIBLE VIRUS DISEASE OF BLACK LOCUST (ROBINIA PSEUDOACACIA) IN KENTUCKY: Last summer a locust tree about 3 inches in diameter, growing on the road side across from the Experiment Station Farm, Lexington, showed chlorotic ring, line, and oak leaf patterns in the leaflets resembling the patterns characteristic of virus infections. These markings were present in the younger leaves in mid-summer but not in the older leaves. The tree was kept under observation during the spring of 1941. Patterns did not develop in the first leaves produced in the spring but were prominent in leaves that developed in June. So far the disease has shown no evidence of injuring the tree although it is possible that it might cause some stunting. Other trees in the immediate vicinity appear to be unaffected. (W. D. Valleau and E. M. Johnson, Kentucky Agricultural Experiment Station.)

SOME HOSTS OF CROWN GALL: This spring on May 6 an outbreak of crown gall on Euonymus radicans in Highland Park, Rochester, New York, was brought to the writer's attention. Isolations made from the galls yielded virulent cultures of the causal organism (Phytomonas tumefaciens). Going over the Check List now in course of revision by Freeman Weiss it appears that crown gall has not been reported previously from New york on this host. This check list also apparently contains no reference to Cornus spp. as hosts of crown gall. In 1930 the writer observed a severe outbreak of crown gall in a planting of ornamental dogwood (Cornus sp.) in a nursery at St. Joseph, Missouri. The galls were of various sizes and were found on stems about 3/4 inch in diameter. One gall taken to the laboratory weighed over a pound. (E. M. Hildebrand, New York State College of Agriculture.)

WHEAT BUNT IN OREGON AND WASHINGTON: On a wheat disease survey trip through eastern Oregon and parts of southeastern Washington, an extremely low incidence of bunt (Tilletia spp.) was observed. In fact, other than slight infections of dwarf bunt (T. tritici) in Klickitat County, Washington, practically no bunt was found. This observation by Doctor Swenson and myself was corroborated by Mr. Suneson and Doctor Salmon. (C. S. Holton, Division of Cereal Crops and Diseases, June 18.)

FIRST RECORDED INCIDENCE OF STRIPE RUST (PUCCINIA GLUMARUM (SCHM.) ERIKS. AND HENN.) IN THE UNITED STATES, EAST OF THE 103' MERIDIAN: On April 11, 1941, Mr. E. S. McFadden, Associate Agronomist, Bureau of Plant Industry, recorded the presence of Puccinia glumarum in the cooperative wheat nursery located at College Station, Texas. According to his letter

of the above date, this rust had spread from a single infection center and was then present on a number of hybrid lines and on rows of Hard Federation wheat growing in the nursery alleys.

A later report states that the rust evidently had ceased to develop in the nursery. Its incidence in that vicinity or elsewhere in the Great Plains has not been observed. (H. B. Humphrey, Division of Cereal Crops and Diseases.)

SECOND X-DISEASE CLINIC AT LOCKPORT, NEW YORK, ON JULY 22

E. M. Hildebrand

Arrangements have been made for a field meeting at Lockport, New York, on Tuesday, July 22, for acquainting investigators from neighboring Canada with the yellow-red virosis or "X" disease of the peach. Because of the importance of this disease we are also extending an invitation to others interested in the United States to participate. Mr. John G. Goodrich of the Niagara County Farm Bureau and the fruit pathologists from the New York Experiment Stations will be hosts to the out-of-state visitors. To be present also is Professor E. M. Stoddard of Connecticut who first discovered the disease in Connecticut in 1933 and made the significant finding that the chokecherry was the reservoir for the virus.

Since 1941 marks the second season that the disease has been found on the peach in Niagara County in Western New York the setting is ideal for showing early stages of disease invasion of an area. The evenings preceding and following the field trip will be devoted to round table discussions centering around the disease but including related diseases of the fruits. The investigations now in progress will be freely shared.

Anyone interested in attending, please correspond with E. M. Hildebrand, Department of Plant Pathology, Cornell University, Ithaca, New York.